Project Design Phase – I
Problem Solution Fit

Date	01 October 2022
Team ID	PNT2022TMID30150
Project Name	VIRTUAL EYE - LIFE GUARD FOR SWIMMING POOLS TO DETECT ACTIVE DROWNING
Maximum Marks	

Problem-Solution Fit

1. CUSTOMER SEGMENT(S) `CS`

Swimmers and Ordinary people, Organization and Trainers

(Define CS, fit into CL)

6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES `CL`

It will be Affordable and Device compatibility and User-friendly device

5. AVAILABLE SOLUTIONS PROS & CONS `AS`

The existing solution which gets the data and after training the model, predicts the results. Various software and device have been developed but not gives accuracy rate

(Explore AS, differentiate)

2. PROBLEMS / PAINS + ITS FREQUENCY `PR`

Lifeguards and trainers can't monitor all the swimmers /persons at a same time

Detection system to detect drowning persons was not fast and accurate

(Focus on PR, tap into BE, understand RC)

9. PROBLEM ROOT / CAUSE `RC`

The possibilities of detection of drowning were not up to the expected level and accuracy rate of the detection of existing system was low so there is a need for developing a system with high accuracy rate in detection

7. BEHAVIOR + ITS INTENSITY `BE`

Get information from others

Search and learn about drowning detection system

Search for solution in online

(Focus on PR, tap into BE, understand RC)

3. TRIGGERS TO ACT `TR`

Death rate of drowning was become high nowadays. System to detect drowning was not give high accuracy rate

(Identify strong TR & EM)

4. EMOTIONS BEFORE / AFTER `EM`

Before: Insecure and stressful

After: Relaxed, Comfortable, feel secure

10. YOUR SOLUTION `SL`

Using CNN -YOLOv7 algorithm to detects the drowning people to get high and fast accuracy rate. It detects the drowning person and alerting by beep alarm and shows the exact position of a drowning person.

8. CHANNELS of BEHAVIOR `CH`

ONLINE

Share information, social media, Blogs

OFFLINE

Monitor persons, Friends and Colleague, get help from lifeguards or trainers

(Extract online & offline CH of BE)